

COMPARISON OF ACT(BALLOON AND ARTIFICIAL URINARY SPHINCTER AMS 800(IN FEMALE PATIENTS WITH STRESS URINARY INCONTINENCE DUE TO SPHINCTER DEFICIENCY

Hypothesis / aims of study

ACT® balloon and AMS 800® artificial urinary sphincter are two surgical treatments of stress urinary incontinence due to sphincter deficiency. A randomized trial comparing these two devices in female patients is about to begin (NCT02490917) but there is currently no study in the literature which compared the two techniques.

The aim of this study was to compare the outcomes of ACT® balloon and AMS 800® artificial urinary sphincter in the treatment of stress urinary incontinence due to sphincter deficiency in women.

Study design, materials and methods

All women surgically treated for stress urinary incontinence due to sphincter deficiency from 2007 to 2016 were included in a single-center retrospective study. AMS 800® artificial urinary sphincter was considered as the standard treatment in these patients during the study period. ACT® balloons were used only in the following cases: moderate incontinence, major comorbidities or refusal of artificial sphincter. Patients' characteristics, perioperative outcomes efficacy (continence status, number of pads per day,...) and complications (postoperative complications, explantation,...) were compared using the Mann-Whitney and Fisher exact tests.

Results

Forty-nine female patients underwent a surgical treatment for stress urinary incontinence due to sphincter deficiency during the study period: 31 with AMS 800® artificial urinary sphincter and 18 with ACT® balloons. All procedures were performed by a single-surgeon. Patients in the balloon group were older (mean : 75.3 vs. 66 ans ; p=0.003) and with more comorbidities (ASA score =3 : 37.5% vs. 8.3% ; p=0.009). In contrast, the rate of previous pelvic surgeries (72.2% vs. 80.6% ; p=0.50) was similar in both groups.

Operative time (46.6 vs. 219.2 minutes ; p<0.001) and length of stay (1.7 vs. 7.2 days; p<0.001) were shorter in the balloon group. The complete continence rate was higher in the artificial sphincter group (63% vs. 13.3% ; p=0.003) but there was no significant difference in terms of number of patients with >80% improvement of urinary incontinence (81.4% vs. 66.6% ; p=0.45).

Intraoperative complications rates (51.6% vs. 5.6% ; p=0.001) and post-operative complications rates (54.8% ; vs. 22.2% ; p=0.04) were higher in the artificial sphincter group but the explantation rates were comparable in both groups (19.3% vs. 13.3% ; p=0.61)

Interpretation of results

AMS 800® artificial urinary sphincter could be more effective than ACT® balloon in the treatment of stress urinary incontinence due to sphincter deficiency in female patients but with increased morbidity.

Concluding message

In this retrospective study, AMS 800® artificial urinary sphincter was associated with higher morbidity but better efficacy than ACT® balloon in the treatment of stress urinary incontinence due to sphincter deficiency in female patients.

Disclosures

Funding: none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** locals ethics committees **Helsinki:** Yes **Informed Consent:** Yes